



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 1 st December 2016	
Attendees: Mr L Phillips (L B Hounslow) & Mr D Kalamantis (Thames Water).	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty & clean. Hoppers 1, 2 & 3 were all drained down with only a small amount of effluent at the base.</p> <p>Tank 1B was empty & clean. Hoppers 1, 2 & 3 were all drained down with only a small amount of effluent at the base of hopper though no odour was noted.</p> <p>Tank 2A was empty & clean. Hoppers 1, 2 & 3 were all drained down with only a small amount of effluent at the base with some scum noted on the surface.</p> <p>Tank 2B was empty & clean. Hoppers 1, 2 & 3 were all drained down with only a small amount of effluent at the base with some scum noted on the surface.</p> <p>Tank 3A was empty & clean. Hoppers 1, 2 & 3 were approximately 1/3 full of relatively fresh effluent.</p> <p>Tank 3B was empty & clean. Hoppers 1, 2 & 3 were all drained down with only a small amount of effluent at the base with some scum noted on the surface.</p> <p>Tanks 4A, 4B, 5A & 5B are covered and odour controlled.</p>	

Tank 6A was empty & clean. Hoppers 1, 2 & 3 were all drained down with only a small amount of effluent at the base with some scum noted on the surface.

Tank 6B was empty & clean. Hoppers 1, 2 & 3 were all drained down with only a small amount of effluent at the base with some scum noted on the surface.

Tank 7A was empty & clean. Hoppers 1, 2 & 3 (shallow hoppers) were full of effluent. These hoppers required further cleaning.

Tank 7B was empty & clean. Hoppers 1, 2 & 3 (shallow hoppers) were full of grit and effluent. These hoppers required further cleaning.

Tank 8A was empty & clean. Hoppers 1, 2 & 3 were full of relatively fresh effluent.

Tank 8B was empty & clean. Hopper's 1, 2 and 3 were full of relatively fresh effluent.

All hoppers 7A – 8B required some form of further cleaning and draining down which Thames Water advised would be undertaken.

Storm Water Channel

The storm feed channel serving STW's 1A-8B was effectively empty of effluent. A localised odour was noted near tanks 4 and 5.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at the time of inspection (approx 13:56).

Monitor 1	0.006	ppm
Monitor 2	0.004	ppm *
Monitor 3	0.000	ppm
Monitor 4	0.004	ppm
Monitor 5	0.010	ppm
Monitor 6	0.000	ppm
Monitor 7	0.003	ppm
Monitor 8	0.000	ppm
Monitor 9	0.007	ppm
Monitor 10	0.005	ppm
Monitor 11	0.008	ppm
Monitor 12	0.006	ppm
Monitor 13	0.006	ppm

*Time stamp incorrect.

Complaints

The Council directly received one complaint by telephone in the preceding week.

A complaint was received from a resident of Kneller Gardens located to the south west of the site on 25th November at 15.47. The complaint advised that the odour had been bad from 09.00 until 15.00 on that day. The resident was not contacted on the day they complained as the call was not passed to the duty Officer on the day it was received and when they contacted the resident advised them that this complaint would be raised with Thames Water on 1st December during the Council's weekly inspection of the site. Kneller Gardens is located to the south west of the site and the part of the works closest to the digesters. The digester logs for that date taken at 08.30 and 19.30 showed that none of the digesters were gassing via the annular seals of the digesters and none of the digesters were releasing gas via the pressure relief valves. The Officer also checked the historic trends at the time of the complaint while undertaking the inspection on 1st December and the readings at the time of complaint were measured at 0.003ppm. The odour log for the AM shift showed that monitor 4 (located to the south of the power house) was spiking occasionally but

for 15 minutes duration max at 0,023ppm and the trends sensor failed for part of day. Monitor No 9 was spiking during afternoon and digester bell heights were high but were okay at 18:00PM. The ICA tech was called in to repair the trend sensor. It has not been possible to identify the source of odour complained of by the resident on this occasion.

The Council directly received no complaints by email in the preceding week.

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 24th November 2016

AM Monitory No 4 spiked at 07:30 for around 30 minutes max 0.0036 and again at 14:30PM but 15 minutes duration max 0.027 engine exhausts likely to be the cause. Monitor No 9 spiked at 07:15 for 10 minutes max at trigger level 0.015ppm again at 13:15PM 15 minutes max 0.020ppm 16:45 15 minutes max 0.022ppm new engine trials taking place as compressors struggling to maintain pressure and FLAM failed now reset.

PM Monitor 4 three spikes under 15 minutes at 10:30pm/02:04am/03:04am one spike over 15 minutes at 04:19am max 0.040. Wind direction to the south therefore its likely exhaust fumes from engines. Monitor 9 multiple spikes throughout the night max 0.038ppm.

Friday 25th November 2016

AM Monitor No4 spiking occasionally but 15 minutes duration max 0.023 trends sensor failed for part of day. Monitor No9 spiking during afternoon digester bell heights high during issues now okay at 18:00PM. **Actions Taken:** called in ICA tech to restore trend sensor.

PM Odour monitor No9 showing odours monitors no4 spiked twice. Actions taken digester bell heights reduced using burner.

Saturday 26th November 2016

AM Monitor No5 spiking at 10:30ish but 15 minutes duration max

0.021ppm. Monitor No4 spiking at 12:33PM 15 minutes duration max 0.031ppm.

PM Odour monitor No4 and No9 showing small amount of odours areas checked and found ok.

Sunday 27th November 2016

AM Odour monitor No4 spiked several times during shift mainly 15 minutes duration highest spike 0.042 max ppm. Monitor No9 spiking on and off regularly mid-morning mostly 15 minutes duration max 0.034 ppm. **Actions Taken:** Carried out odour patrol.

PM Odour monitor No4 showing high digester levels of gas low seals on digesters starting to foam. Odour monitor No9 also showing high. **Actions Taken :** Area checked anti foam dose rate increased.

Monday 28th November 2016

AM Odour Monitor No4 0.026- 5:49AM- 06:02AM.

PM No odour spikes, no odour problems.

Tuesday 29th November 2016

AM Monitor one spike less than 15 mins 0.022ppm.

PM Monitor No5 on or around trigger level all shift max 0.017 odour from drain cover on main drive otherwise no odours found monitor No9 spiking at 12:17am but 15 minutes duration. **Actions Taken:** No 17 digester Westside VV found chattering reseated.

Wednesday 30th November 2016

AM Monitor No5- Spiking a lot of the day. – Max 0.024

PM Monitor No5 spiking on or around trigger level between 6PM-midnight max 0.025. Drain cover still requires replacing odour coming from low level sewer.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
25/11/2016	40	1200	267	1507	6098	7605
28/11/2016	18	1200	0	1278	3131	4409
30/11/2016	96	1279	0	1377	2594	3971

There are no limits for the East Side Primary Settlement tanks as these are covered and odour controlled.

Thames is required by the terms of the abatement notice agreed in 2005 to notify LBH on the next working day of any such exceedance and notify LBH within three working days of any appropriate remedial measure taken within three days and which has been complied with in this instance

Imported Sludge

There have been 45 imports of sludge received in the last week, each import containing 30m³ of sludge.

Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection as works were being carried out in that area. Thames Water advised that the doors would be closed once the works have been completed.

Digesters

Digesters 1-4 are permanently out of use.

Digester 5- In use and had a weak seal, no evidence of spillage.

Digester 6- In use however, weak seal bubbling and foamy. The digester was gassing off and a spill was noted on the coping stones.

Thames Water advised that they would clean up the spill today.

Digester 7- In use and had a good seal, no evidence of spillage.

Digester 8- In use and had a weak seal, no evidence of spillage.

Digester 9- In use and had a weak seal, no evidence of spillage.

Digester 10- In use and had a weak seal, no evidence of spillage.

Digester 11- In use and had a weak seal, no evidence of spillage.

Digester 12- In use and had a weak seal, no evidence of spillage.

Digester 13 - Out of use – empty & clean.

Digester 14- In use and had a weak seal, no evidence of spillage.

Digester 15- In use and had a weak seal, no evidence of spillage.

Digester 16- Out of use – empty & clean

Digester 17- In use and had a weak seal, no evidence of spillage.

Digester 18 in use and had a good seal, no evidence of spillage.

Digester 19 Out of use – empty & clean.

Digester 20- In use and had a weak seal, no evidence of spillage.

Automatic dosing of anti-foaming agent in now in use and TW advised that this is also applied manually at least twice a day to all operational digesters.

Return Activated Sludge Channel

The RAS channel (which runs in the ground between FST's 61-64 &

65-67) was clean and free flowing at the time of the inspection.
Thames confirmed a tanker is cleaning this out on a weekly basis.

West side primary settlement tanks (PST)

Rectangular PSTs are now covered and odour controlled.

Circular PSTs 9, 10, 11 & 12 were all in operation and had clean 'fat-free' surfaces.

GENERAL

Final Settlement Tanks East Side of Works

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78).

At the time of the inspection tanks 71 to 78 were in use.

All 8 tanks have hose and sprinkler systems fitted onto the sweeper bridges that were operating.

East Side Screen House

The screen house now has new doors fitted, both pairs of which were closed at the time of the inspection.

Thames confirmed all screens were in operation.

Skips

On the East side there were two low level open skips that were full and covered.

On the West there were no skips in the skip storage area.

Pasteurisation Plant

The pasteurisation plant was in service at the time of the inspection.
The TW officer confirmed all 12 streams were running.

Section 106 agreement

There have been no breaches of the s106 agreement in the last week.

West Side Aeration Lanes (Old)

No issues appeared evident.

New Works (West Side)

The mixed liquor feed channel serving aeration lanes 21-25 was free flowing and clear of debris at the time of the inspection.

The sprinkler system for the aeration lanes is in use permanently and most were working at the time of the inspection.

Thames confirmed tanker crews are cleaning the mixed feed liquor channel out on a weekly basis.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring – 01/12/2016

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.183(av)	0.2	Yes
East OCU	0.07(av)	0.05	Yes
West inlet	0.000(av)	0.05	Yes
Sludge reception outlet	0.012(av)	0.8	Yes
Thickening plant outlet	0.029(av)	0.6	Yes
Pasteurisation plant outlet (OCU 12)	0.0002(av)	0.5	Yes
Transfer PS outlet	0.072(av)	0.6	Yes
New West OCU 11 outlet	0.010(av)	0.6	Yes

Jerome reading